

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

ORDER NO. 00-111

REVISED SITE CLEANUP REQUIREMENTS FOR:

**DILLINGHAM CONSTRUCTION N. A., INC.
JOB AND ELAINE DEBRUIN**

for the property located at

**903 EIGHTH STREET
NAPA, NAPA COUNTY, CALIFORNIA**

**The California Regional Water Quality Control Board, San Francisco Bay Region
(hereinafter the Board), finds that:**

- 1. Site Location:** The former Dillingham Construction N. A., Inc.'s property (hereinafter referred as to the site) is approximately 24,000 square feet in area, and is located at 903 Eighth Street in Napa County (see Figure 1). The site is bordered on the north by residences, on the south by commercial development, on the east by a former railroad spur, a residence, commercial building and Eighth Street, and on the west by the Napa River. There are four contiguous buildings totaling approximately 10,000 square feet that occupy the north and west portions of the site. The remainder of the site is paved with the exception of a thin strip of land along the Napa River. The site has had numerous prior owners and operators engaged in a variety of industrial uses, including petroleum storage and vehicle repair and maintenance. Review of Sanborn Fire Insurance maps indicated three aboveground storage tanks occupied the southern portion of the site at various times.
- 2. Site History:** Prior to March 20, 1972, Basalt Rock Co., Inc. (now known as the Dillingham Construction N. A., Inc.) owned and operated the site. Historical site uses include bulk fuel distribution and truck repair. The site was the location of three large above ground fuel tanks.

According to an environmental assessment report prepared by Kleinfelder, Inc. for the U.S. Army Corps of Engineers, large quantities of fuel oil and diesel were stored on-site and spills reportedly occurred. Kleinfelder estimated the total volume of the above ground tanks to be 51,000 gallons.

On March 8, 1989 the City of Napa Public Works Department reported petroleum hydrocarbon odors in a trench close to the property. The property is currently owned by Job and Elaine DeBruin.

3. Napa River Flood Control Project:

The site is one of eight petroleum-impacted sites within the contract II.B area. The eight sites are located in areas between Eighth/River Streets and Oil Company Road (see Figure 2). The majority of these sites involved the storage, handling, and distribution of diesel, heating oil and gasoline. Beginning in the north and moving southward, they are as follows:

NR17- The Palzis Property; NR18-The Dillingham Construction N. A., Inc.; NR19-The North Bay Oil Company; NR20-Fraser-Edward Paving Company (Formerly Mobil Bulk Plant 99-NB); NR33-Former Phillips Oil Terminal; NR35-Former Texaco, Inc. Oil Terminal; NR36 Former ARCO Oil Terminal, and NR37-the Former Exxon Oil Terminal.

The U.S. Army Corps of Engineers, which will fund and execute the construction of the flood control project, requires that polluted properties be acquired by the District and remediated before construction begins. Construction has already begun on the early contracts, and is scheduled to begin in the summer of 2002 for contract II.B. Significant delay in remediation of petroleum contamination at the eight sites is likely to delay the Corps' construction work and jeopardize federal funding for the flood control project. The District has proposed a consolidated remediation project for the eight sites, in order to hasten remediation and reduce remediation costs. The District has indicated its willingness to provide polluted-soil treatment and disposal capability as part of a consolidated remediation project.

- 4. Named Dischargers:** Dillingham Construction N. A., Inc. is named as a discharger because it is the past owner and operator of the site and based on past chemical usage and operations described in finding 2 above. Job and Elaine Debruin are named as dischargers because they are the current property owners. Job and Elaine Debruin will be responsible for compliance only if the Board or Executive Officer finds that the other named discharger (Dillingham Construction N. A., Inc.) has failed to comply with the requirements of this order.

Dillingham has requested that Shell Oil Company also be named as a responsible party on the basis of an event that allegedly occurred over 50 years ago. As these parties are currently under litigation, Board Staff are awaiting the outcome of the case. At that time the Board will re-evaluate whether Shell Oil Company be named as a discharger in this order.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or threatened to enter waters of the state, the Board will consider adding that party's name to this order.

5. **Regulatory Status:** This site is currently under Site Cleanup Requirements as established by Order No. 96-114 and as amended by Order No. 98-068.
6. **Site Hydrogeology:** Shallow groundwater underlying the site occurs at an approximate depth of 10 feet, and groundwater elevations in some wells are influenced by tidal fluctuations on the Napa River. Groundwater flow is generally to the west, toward the Napa River.
7. **Remedial Investigation:** Kleinfelder, Inc. prepared a Preliminary Site Assessment for the site, dated July 15, 1992, at the request of the U.S. Army Corps of Engineers. The pollutants of concern at the site are petroleum hydrocarbons (diesel and gasoline) and benzene, toluene, ethyl-benzene, and xylene (BTEX).

In March 1998, in compliance with the requirements of Order 98-068, Dillingham's consultant, ARCADIS Geraghty & Miller, conducted soil and groundwater investigation at the site. Eight soil borings (SB-1 through SB-8) were installed at the site to provide a preliminary evaluation of soil and groundwater impacts. The primary constituents of concern at the site were diesel-range hydrocarbons. Concentrations of Total Petroleum Hydrocarbon (TPH) in the diesel range were detected in shallow soil at a maximum concentration of 2,800 mg/kg (SB-3 at 2 feet bgs). The maximum concentrations of TPH as diesel found below 5 feet bgs in the investigation were 24 mg/kg (SB-6 at 6 feet bgs). Five groundwater-monitoring wells (MW-1 through MW-5) were subsequently installed at the site to evaluate groundwater impacts (Site Assessment Report, dated April 24,

1998). TPH as diesel has been detected at a maximum concentration of 23,000 µg/L in well MW-1 at the site. In accordance with the investigative reports, which have been submitted to the Board, the extent of plume has been defined, and groundwater data are indicative of contaminant plume migration off-site.

The groundwater plume originating on this site is impacting the water quality of the Napa River and groundwater quality of the neighboring properties to the south, northeast and east (includes under the existing railroad and the area within 301 River Street, discussed below).

8. **Nearby Sites:** The Palzis Property, which was owned by the Basalt Rock Company, is located on 301 River Street east of the site. Basalt reportedly operated a 5000-gallon gasoline underground storage tank and several above ground storage tanks containing diesel fuel and stove oil at the Palzis Property. The property south of the site was the Former Phillips Oil Terminal, which was used as a bulk fuel facility.
9. **Interim Remedial Measures:** An interim remedial action was initiated at the site in November 1998 in accordance with ARCADIS Geraghty & Miller's Interim Remedial Action Work Plan, dated October 28, 1998. The interim remedial action employs an in-situ reactive zone to enhance anaerobic biodegradation with the use of nutrient infiltration trenches installed adjacent to the Napa River. Quarterly groundwater monitoring has been conducted to evaluate the effectiveness of the interim remedial actions in abating the petroleum hydrocarbon impacts to the soil and groundwater beneath the site and preventing petroleum hydrocarbon migration to the Napa River. Lines of evidence of enhanced biodegradation have been observed, but the technology has not yet demonstrated the capability for degrading the diesel-range hydrocarbons in groundwater. The most recent monitoring reports document presence of elevated petroleum hydrocarbon in the subsurface.

The groundwater data are indicative of plume migration off-site. The dischargers need to initiate additional cleanup to abate pollution beneath the property and in the areas to which it extends, towards the Napa River, the south and in areas to the northeast and east as discussed above.

10. **Basin Plan:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

The potential beneficial uses of groundwater underlying and adjacent to the site include:

- a. Municipal and domestic water supply
- b. Freshwater replenishment to surface waters
- c. Industrial process water supply
- d. Agricultural water supply

The existing and potential beneficial uses of the Napa River, San Pablo Bay, and contiguous surface waters include:

- a. Water contact and non-water contact recreation
- b. Fresh water replenishment
- c. Wildlife habitat
- d. Preservation of areas of special biological significance
- e. Fish migration and spawning
- f. Navigation
- g. Estuarine habitat
- h. Ocean commercial and sport fishing
- i. Preservation of rare and endangered species

11. **Other Board Policies:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally high contaminant levels.

12. **State Water Board Policies:** State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives.

State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

13. **Preliminary Cleanup Goals:** The dischargers will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remediation investigation and the scope of the remedial action plan. Pending the establishment of cleanup standards, the following preliminary cleanup goals should be used for this purpose:

Medium	TPHg	TPHd
a. Soils		
Category A (excavated)	n/a	n/a
Category B (marsh plain)	12 mg/kg	144 mg/kg
Category C (flood plain)	629 mg/kg	518 mg/kg
Category D (deeper soils)	n/a	n/a
b. Groundwater		
Category B (marsh plain)	n/a	n/a
Category C (flood plain)	3,700 ug/l	640 ug/l

Note: See attached Figure 3 for definitions of categories and a schematic of how they would be applied.

14. **Adverse Effects on Beneficial Uses of the Napa River: Petroleum** hydrocarbons are found at high concentrations in shallow groundwater at this site, including free product near the water table. These constituents are able to migrate readily in groundwater, particularly in the more transmissive sands and gravels found in the subsurface. These constituents are found in groundwater near the Napa River at levels substantially above applicable surface water objectives and discharge to the Napa River following dilution and attenuation. This discharge threatens beneficial uses of the Napa River.
15. **Basis for 13304 Order:** The dischargers have caused or permitted waste to be discharged or deposited where it is or threatens to be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
16. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.
17. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
18. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.

19. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers (or their agents, successors, or assigns) shall cleanup and abate the effects described In the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner, which will degrade water quality or adversely affect beneficial uses of waters of the State, is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State Is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

B. TASKS

1. **NOTICE OF INTENT FOR PARTICIPATION IN A CONSOLIDATED REMEDIATION APPROACH FOR THE NAPA FLOOD CONTROL PROJECT**

a. **COMPLIANCE DATE: November 1, 2000**

Submit a Notice of Intent (NOI) indicating whether the dischargers are or are not participating in the consolidated remediation approach proposed by the District. This selection will determine the task 2 deadline and will allow the District to plan its consolidated project.

b. COMPLIANCE DATE: December 15, 2000

If the dischargers elect to participate in the consolidated remediation approach in Task 1.a, then by this date they must submit a signed copy of their agreement with the District.

2. PROPOSED FINAL REMEDIAL ACTIONS AND CLEANUP STANDARDS

COMPLIANCE DATE: March 1, 2001*

* This compliance date shall be January 1, 2001, if the discharger submits a copy of the signed agreement to participate in the consolidated remedial approach (pursuant to Task 1.b). The Executive Officer may approve a delay of up to 3 months in this deadline if compliance is delayed due to factors reasonably beyond the dischargers' control.

Submit a technical report acceptable to the Executive Officer containing:

- a. Results of the site assessment
- b. Feasibility study evaluating alternative final remedial actions, with one alternative should include cooperative cleanup with neighboring parties
- c. Risk assessment for current and post-cleanup exposures at the discharger's option
- d. Recommended final remedial actions and cleanup standards
- e. Implementation tasks and time schedule such that cleanup is achieved by June 30, 2002.

Item b should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.

Items a through c should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial Investigations and feasibility studies, Health and Safety Code Section 25356.1 (c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

3. **Delayed Compliance:** If the dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.

C. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good O&M:** The dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to Investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Water Resources Control Board managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the dischargers over

reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the dischargers shall permit the Board or its authorized representative:
 - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the requirements of this Order.
 - c. Inspection of any monitoring or remediation facilities installed in response to this Order
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the dischargers.
5. **Contractor/Consultant Qualifications:** All technical documents (plans, specifications, and reports) shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
6. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).
7. **Technical Documents:** All technical reports submitted in compliance with this Order shall be satisfactory to the Executive

Officer, and, if necessary, the Dischargers may be required to submit additional information.

8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
 - a. City of Napa Department of Public Works
 - b. Napa County Department of Environmental Management
 - c. Napa County Flood Control and Water Conservation District
9. **Reporting of Changed Owner or Operator:** The dischargers shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is discharged or threatens to be discharged in or on any waters of the State, the dischargers shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

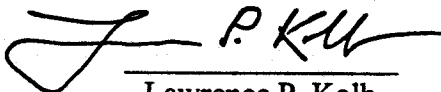
A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.
11. **Secondarily Responsible Discharger:** Within 60 days of being notified by the Executive Officer that other named dischargers have

failed to comply with this order, Job and Elaine Debruin as property owners shall then be responsible for complying with this order. Task deadlines will be automatically adjusted to add 60 days.

12. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary.
13. **Rescission of Existing Order:** This Order supercedes and rescinds Order Nos. 96-114 and 98-068.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 18, 2000.



Lawrence P. Kolb
Acting Executive Officer

- Figures:
- (1) Site Location Map
 - (2) Contract II.B Sites Location Map
 - (3) Preliminary Cleanup Goals Schematic

FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13267 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

EXPLANATION

Former Fuel Oil Tanks (Sanborn 1949)

Monitoring Well Locations

Infiltration Trench Locations

4,900

1,200

2.2

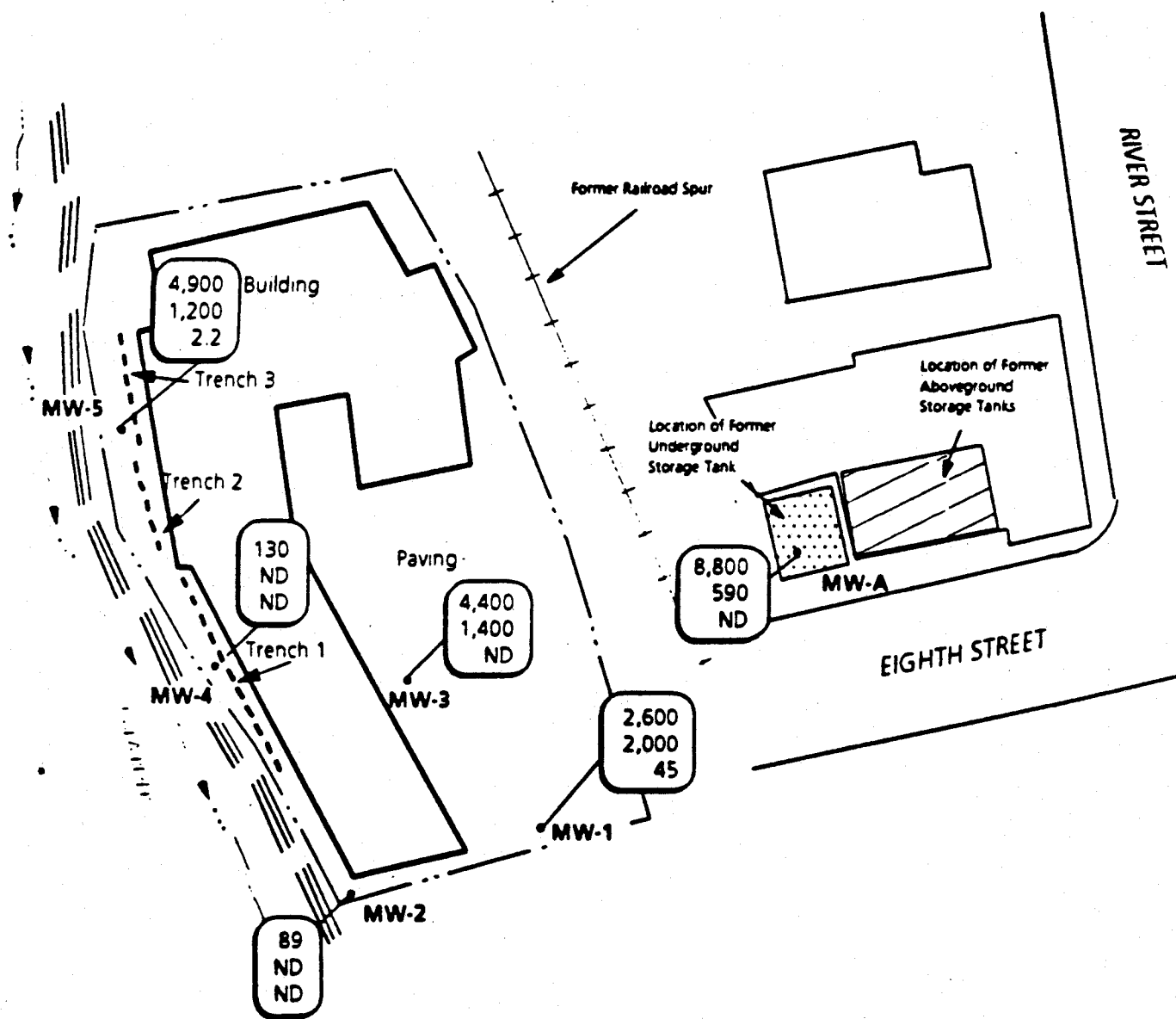
TPH as Diesel ($\mu\text{g/L}$) with silica gel cleanup

TPH as Gasoline ($\mu\text{g/L}$)

Benzene ($\mu\text{g/L}$)

ND

Not Detected. Concentrations below laboratory detection limits.



DILLINGHAM PROPERTY

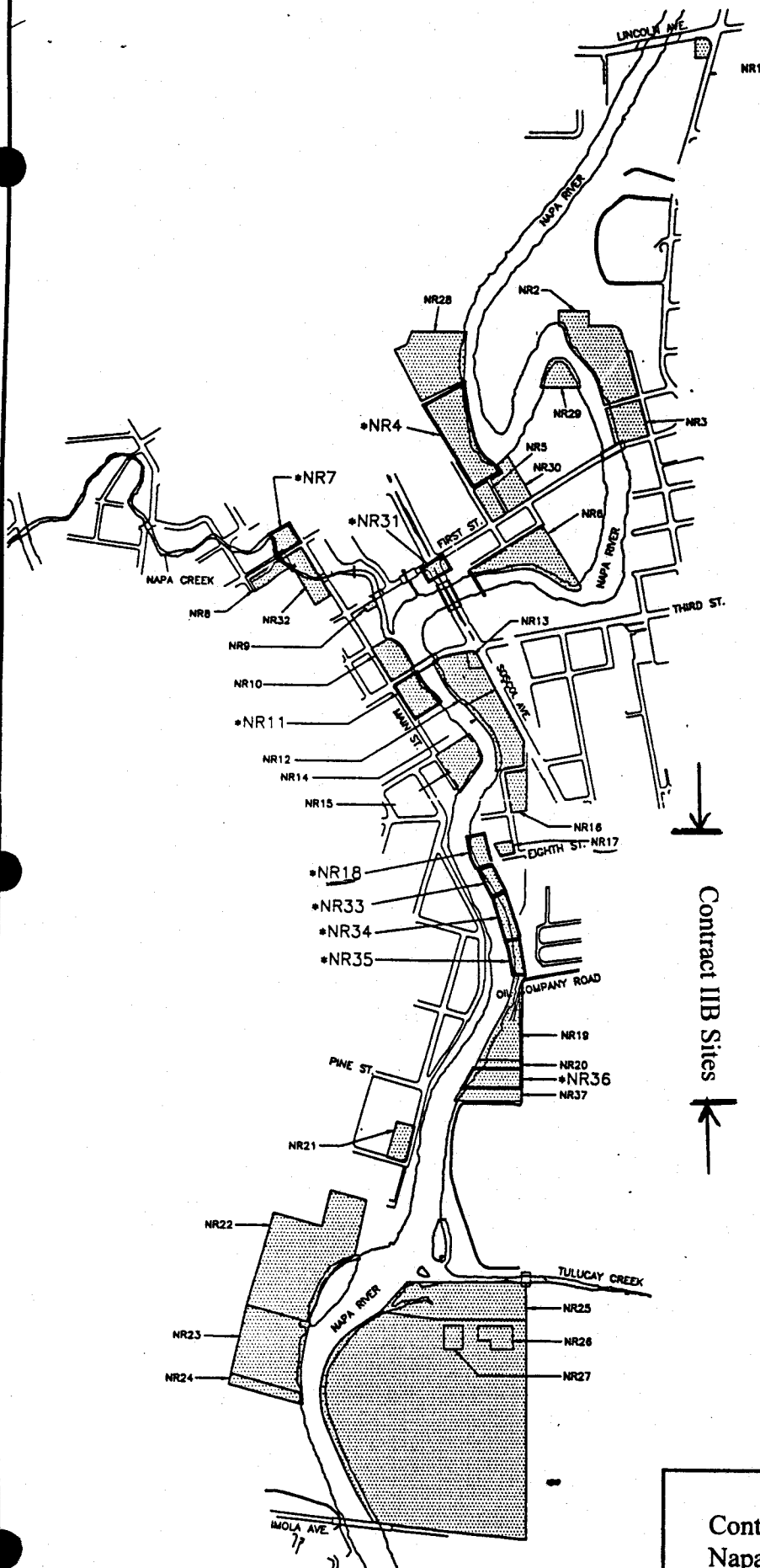
CONCENTRATIONS OF PETROLEUM HYDROCARBONS
IN GROUNDWATER, DECEMBER 16, 1999

903 Eighth Street

RC000383 0001

FIGURE





SITES

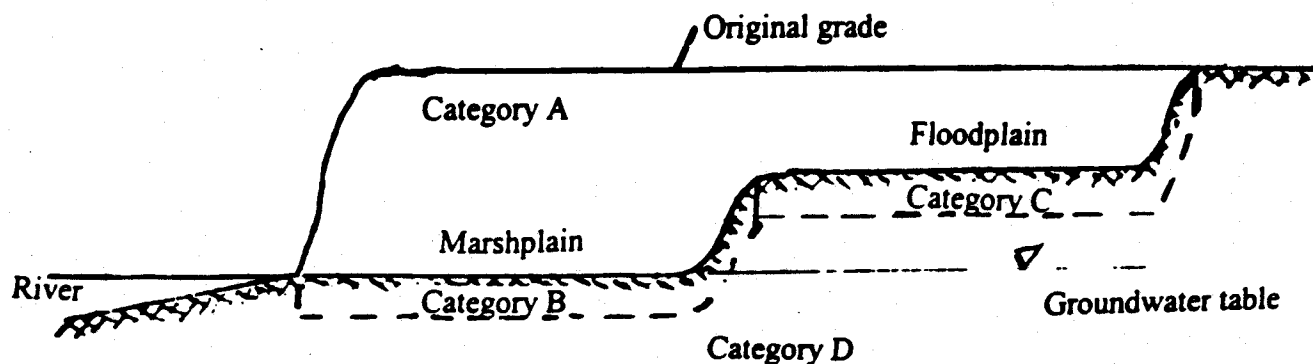
- NR1 UNION 78 GAS STATION (FORMER SITE)
1855 SILVERADO TRAIL
- NR2 NAPA GARBAGE SERVICE
400 CLAY STREET
- NR3 J.V. WAREHOUSE
428 FIRST STREET
- NR4 AL'S AUTO DISMANTLERS
1274 MCKINSTRY
- NR5 VALLEY TIRE AND BRAKE
844 FIRST STREET
- NR6 NAPA COUNTY CORPORATION YARD
933 WATER STREET
- NR7 REDEVELOPMENT AGENCY
(FORMER P.M. QUINN PROPERTY)
1201 MAIN STREET
- NR8 BUS TRANSFER STATION
1151 PEARL STREET
- NR9 RIVERSIDE SERVICE
987 FIRST STREET
- NR10 VETERAN'S MEMORIAL PARK
800 MAIN STREET
- NR11 NAPA COUNTY FLOOD CONTROL AND
WATER CONSERVATION DISTRICT
EAST SIDE MAIN STREET BETWEEN
THIRD AND FOURTH STREETS
- NR12 NOYES LUMBER COMPANY
929 THIRD STREET
- NR13 CHEVRON GAS STATION (FORMER SITE)
795 SOSCOL
- NR14 BIG "D" PRODUCTS
705 SOSCOL AVENUE
- NR15 A HATT BUILDING
550 MAIN STREET
- NR16 NAPA VALLEY ICE COMPANY
965 SIXTH STREET
- NR17 PALZIS PROPERTY
301 RIVER STREET
- NR18 END OF EIGHTH STREET
(FORMER BASALT ROCK CO. OIL TERMINAL)
903 EIGHTH STREET
- NR19 NORTH BAY OIL COMPANY
477 OIL COMPANY ROAD
- NR20 FRASER-EDWARDS PAVING COMPANY
415 OIL COMPANY ROAD
- NR21 FORMER COAL GASIFICATION PLANT
NW CORNER OF ELM AND RIVERSIDE
- NR22 SAWYER OF NAPA TANNERY
88 S. COOMBS STREET
- NR23 TANNERY ROW PROPERTIES
101 S. COOMBS STREET
- NR24 KRAINERT HEATING & AIR CONDITIONING CO.
182 S. COOMBS STREET
- NR25 NAPA COUNTY ANIMAL SHELTER
942 MIOLA AVENUE
- NR26 NAPA SANITATION DISTRICT
950 MIOLA AVENUE
(DREDGE SPILLAGE)
- NR27 NAPA SANITATION DISTRICT
950 MIOLA AVENUE
(FORMER LANDFILL)
- NR28 SLINSEN CONSTRUCTION COMPANY
1314 MCKINSTRY STREET
- NR29 OX-BOW INVESTMENT ASSOCIATION
540 FIRST STREET
(UNREPORTED LANDFILL)
- NR30 ACT CONSTRUCTION COMPANY
622 FIRST STREET
- NR31 FORMER PG&E YARD AND MACHINE SHOP
SOSCOL AVENUE AND FIRST STREET
- NR32 FORMER BLACKSMITH SHOP
1101 MAIN STREET
- NR33 FORMER PHILLIPS OIL TERMINAL
901 EIGHTH STREET
- NR34 NAPA VALLEY WINE TRAIN PROPERTY
800 EIGHTH STREET
- NR35 FORMER TEXACO OIL TERMINAL
508 OIL COMPANY ROAD
- NR36 FORMER ARCO OIL TERMINAL
100 OIL COMPANY ROAD
- NR37 FORMER EXXON OIL TERMINAL
385 OIL COMPANY ROAD

APPROXIMATE SCALE
0 200 400 600 800 1000
SCALE IN FEET

Figure 2
Contract IIB Site Location Map
Napa County Flood Control &
Water Conservation District
Napa, California

Figure 3

Risk-based TPH cleanup goals for sites affected by Napa River flood control project



	TPHg (1)	TPHd (1)	Units / Source	
SOILS				
Category A – removed for project			see note (2)	
Category B – marshplain	12	144	mg/kg	SF Presidio
Category C – floodplain	629	518	mg/kg	SF Airport
Category D – deeper soils			see note (3)	
GROUNDWATER				
Category B – below marshplain	n a	n a		
Category C – below floodplain	3,700	640	ug/l	SF Airport

Notes:

1. These cleanup goals may be adjusted for site-specific soil type, provided that elutriate toxicity test(s) acceptable to the Board are conducted to confirm the protectiveness of the adjusted goals. The TPHg marshplain value of 12 mg/kg would need to be adjusted upward to ambient concentrations (about 93 mg/kg).
2. Category A TPH goal depends on reuse/disposal of soil. For onsite reuse, refer to category B-D goals. For offsite reuse/disposal, see WDR for details.
3. Category D TPH goal is to removal free product or demonstrate to Board satisfaction that TPH will not migrate to areas B or C (shallow soils) under post-construction conditions, either with or without engineering controls.

Definitions:

Category A – soils to be excavated to create marshplain and floodplain

Category B – marshplain soils (0 to 5* feet below final grade)

Category C – floodplain soils (0 to 5* feet below final grade)

Category D – soils more than 5* feet below final grade

* option of a different value if justified to Board satisfaction based on engineering controls, contingency plan, or site-specific "fate and transport" analysis